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Data Sheet
August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz SMIQ02E 300kHz to 2.2GHz Signal Generator

Rohde & Schwarz SMIQ02E Vector Signal Generator 300 kHz to 2.2 GHz The R&S SMIQ02E is the economy 2.2 GHz vector signal generator in the original SMIQ family (order 1106.1506.02). Range is 300 kHz to 2.2 GHz with 0.1 Hz resolution. SMIQ02/03 target development and type-approval versatility; SMIQ02E/03E are production-oriented economy models with FM/φM modulator SM-B5 as standard. Analog and digital modulation, GMSK and π/4 DQPSK class baseband, and the SMIQ option set support cellular production test. Harmonics are less than minus 30 dBc at levels at or below 10 dBm. The R&S SMIQ02E is the economy 2.2 GHz vector signal generator in the original SMIQ family (order 1106.1506.02). Range is 300 kHz to 2.2 GHz with 0.1 Hz resolution. SMIQ02/03 target development and type-approval versatility; SMIQ02E/03E are production-oriented economy models with FM/φM modulator SM-B5 as standard. Analog and digital modulation, GMSK and π/4 DQPSK class baseband, and the SMIQ option set support cellular production test. Harmonics are less than minus 30 dBc at levels at or below 10 dBm.

MODEL	CALIBRATION
Rohde & Schwarz SMIQ02E	Available on request
CONDITION	**STATUS**
Used	In stock
RFQ / SKU	**LISTING**
SMIQ02E	https://aumictechlabs.com/products/smiq02e-2/

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Rohde & Schwarz SMIQ02E is a compact signal generator covering 300 kHz to 2.2 GHz, engineered for production environments where cost-effective performance matters. It delivers both analog and digital modulation across evolving mobile radio standards, with frequency resolution to 0.1 Hz and output power spanning −144 dBm to +13 dBm. The broadband I/Q modulator ensures outstanding vector accuracy, while phase noise reaches −126 dBc at 1 GHz (20 kHz offset).Digital modulation extends to 7 Msymbol/s, supporting GFSK, GMSK, and π/4 DQPSK via optional modules. Fast frequency switching in 20 ms and sub-ppb time base stability (0.000001 /yr) enable rapid test transitions and long-term coherence. Remote control via GPIB bus and high-speed data interfaces (USB 3.0, 1 Gbit LAN, proprietary HS Digital I/Q) streamline production integration.Technical Specifications Frequency Range: 300 kHz to 2.2 GHz Frequency Resolution: 0.1 Hz Frequency Switching Time: 20 ms typical Time Base Stability: 0.000001 /yr Output Power Range: −144 dBm to +13 dBm Phase Noise: −126 dBc at 1 GHz, 20 kHz offset Output Impedance: 50 Ω VSWR: <1.5 for f ≤ 1.04 GHz; 1.04 GHz Symbol Rate (Digital Modulation): Up to 7 Msymbol/s Dimensions: 435 mm (W) × 192 mm (H) × 460 mm (D) Weight: 25 kg (fully equipped) Power Supply: 100 V to 240 V AC (±10%), ≤150 VA, 50–60 HzKey Features Analog modulation (AM, FM, phase modulation) Digital modulation (GFSK, GMSK, π/4 DQPSK) with optional SMIQB10 modulation coder Vector signal generation with broadband I/Q modulator Pulse modulation capability GPIB remote control for automated test sequences USB 3.0 and 1 Gbit LAN for file transfer Proprietary HS Digital I/Q interfaceTypical Applications Production testing of mobile radio receivers and transmitters TDMA, CDMA, PHS, NADC, PDC, GSM, and IS-95 CDMA standard validation (with standard-specific options) Vector signal generation for complex modulation schemes Fading and multipath simulationCompatibility & Integration SMIQB10: Digital modulation coder (GFSK, GMSK, π/4 DQPSK) SMIQB11: Internal data generator with 4 Mbit memory SMIQB14, SMIQB15: Fading simulation modules SM-B1: High-stability OCXO reference oscillator SM-B5: FM/phase modulation module

Features & description

From manufacturer datasheet

Features

• Economy sibling of SMIQ02 (development) at the same 2.2 GHz RF ceiling • SM-B5 FM/φM included onEmodels (optional on SMIQ02/03) • Optional SM-B1 OCXO • Optional data generator, fading, noise, BERT, digital standards • IEC/IEEE remote for production racks

Applications

• Production ATE of 2G/3G receivers to 2.2 GHz • Vector-modulated component test • Analog AM/FM/φM stimulus • Digital-standard options (IS-95, W-CDMA, and others as fitted) • List-mode and swept production hops

SMIQ02E Characteristics / Specifications

PARAMETER	VALUE
Model	SMIQ02E
Manufacturer	Rohde & Schwarz
Instrument Type	Vector signal generator (economy)
Alias	SMIQ 02E; R&S SMIQ02E
Order Number	1106.1506.02
Frequency Range	300 kHz to 2.2 GHz
Frequency Resolution	0.1 Hz
Reference Aging Standard	1e-6 per year (after 30 days)
OCXO SM B1 Aging	less than 1e-9 per day
Reference Temperature Effect Standard	2e-6 (0 C to 50 C)
Harmonics at 10 dBm	less than minus 30 dBc
FM PhiM Modulator	SM-B5 standard onEmodels
Intended Role	production economy vector generator
Sibling SMIQ02 Range	300 kHz to 2.2 GHz (development)
Sibling SMIQ03E Range	300 kHz to 3.3 GHz
Sibling SMIQ03 Range	300 kHz to 3.3 GHz (development)
Output Impedance	50 ohm
Modulation Analog	AM, FM, phiM, pulse (as fitted)
Modulation Digital	GMSK, PSK, QAM class per options
Baseband Filters	root-cos, cos, Gauss, Bessel class
Symbol Rate Class	GMSK and PSK/QAM per data sheet option set
Level Class	SMIQ family high output with electronic attenuator
Remote Interface	IEC IEEE bus
Form Factor	SMIQ family benchtop
Data Generator Option	SMIQB11 class

PARAMETER	VALUE
Digital Standards	option-dependent (B42/B43 and later)
Calibration Cycle Class	three-year SMIQ family
RF Start	300 kHz
RF Stop	2.2 GHz Notes Specs from the R&S SMIQ02/02E/03/03E vector signal generator data sheet. E models are production economy units; confirm SM-B1 and digital-standard options. Do not confuse with SMIQ02B (laterBfamily, 1125.5555.02).

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications

Specifications

PARAMETER	VALUE
Model	SMIQ02E
Manufacturer	Rohde & Schwarz
Instrument Type	Vector signal generator (economy)
Alias	SMIQ 02E; R&S SMIQ02E
Order Number	1106.1506.02
Frequency Range	300 kHz to 2.2 GHz
Frequency Resolution	0.1 Hz
Reference Aging Standard	1e-6 per year (after 30 days)
OCXO SM B1 Aging	less than 1e-9 per day
Reference Temperature Effect Standard	2e-6 (0 C to 50 C)
Harmonics at 10 dBm	less than minus 30 dBc
FM PhiM Modulator	SM-B5 standard onEmodels
Intended Role	production economy vector generator
Sibling SMIQ02 Range	300 kHz to 2.2 GHz (development)
Sibling SMIQ03E Range	300 kHz to 3.3 GHz
Sibling SMIQ03 Range	300 kHz to 3.3 GHz (development)
Output Impedance	50 ohm
Modulation Analog	AM, FM, phiM, pulse (as fitted)
Modulation Digital	GMSK, PSK, QAM class per options
Baseband Filters	root-cos, cos, Gauss, Bessel class
Symbol Rate Class	GMSK and PSK/QAM per data sheet option set
Level Class	SMIQ family high output with electronic attenuator
Remote Interface	IEC IEEE bus
Form Factor	SMIQ family benchtop

Option SM B1: OCXO 1036.7599.02
Option SM B5: FM/phiM 1036.8489.02 (standard on E)

Specifications

PARAMETER	VALUE
Data Generator Option	SMIQB11 class
Digital Standards	option-dependent (B42/B43 and later)
Calibration Cycle Class	three-year SMIQ family
RF Start	300 kHz
RF Stop	2.2 GHz

Notes
Specs from the R&S SMIQ02/02E/03/03E vector signal generator data sheet. E models are production economy units; confirm SM-B1 and digital-standard options. Do not confuse with SMIQ02B (laterBfamily, 1125.5555.02).

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: **sales@aumictech.com** · +1 (484) 841-9341

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